REMARKS

By the foregoing Amendment, Claims 1 and 2 are amended. Entry of the Amendment, and favorable consideration thereof, is earnestly requested. Claims 1-20 are currently pending.

Applicant thanks Examiner Kunemund for the courtesy extended by him during the personal interview that took place on 14 May 2009. Applicant has reviewed the Interview Summary provided at the conclusion of the interview, and is in agreement therewith, and as such, adopts the contents thereof as its Substance of the Interview (see MPEP 713.04).

Claims 1, 3, 6, 9, and 10 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,218,212 to Saito et al. ("Saito"), Claims 7, 8 and 11-15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Saito et al., and Claims 2, 16, and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Saito et al. in view of DE 10247921 to Kaeppler ("Kaeppler"). Applicant respectfully asks the Examiner to reconsider these rejections in view of the above Amendments and the below Remarks.

Claim 1 recites a device for depositing crystalline layers on substrates in a process chamber. The device includes a gas inlet member disposed at substantially the center of the process chamber, which forms gas inlet zones out of which gaseous starting materials are introduced into the process chamber. The gas inlet zones comprise: a bottom gas inlet zone neighboring the floor of the process chamber; a top gas inlet zone neighboring the ceiling of the process chamber; and a middle gas inlet zone between the top and bottom gas inlet zones. A supply of a hydride is connected to the bottom and the top gas inlet zones and a supply of a metalorganic compound is connected to the middle gas inlet zone. At

least one substrate carrier is arranged around the gas inlet member and is rotationally driven around its axis. With this device, the hydride and metalorganic starting materials form a stream of gas that is homogenized and at least partially pre-decomposes in an inlet zone directly adjacent to the gas inlet member. The decomposition products of the starting materials are then deposited on the substrates in a growing zone adjacent to the inlet zone.

The related method of Claim 2 recites the steps of: positioning a gas inlet member at substantially the center of a process chamber; arranging one or more substrates in a rotationally symmetric manner around the gas inlet member; rotating each substrate; introducing a first gaseous starting material through a bottom gas inlet zone neighboring the floor of the process chamber and a top gas inlet zone neighboring the ceiling of the process chamber; and introducing a second gaseous starting material through a middle gas inlet zone between the bottom gas inlet zone and the top gas inlet zone. The first starting material is a hydride and the second starting material is a metalorganic compound. Again, the starting materials flow in a horizontal direction together with a carrier gas through the process chamber, the stream of gas being homogenized and the starting materials at least partially pre-decomposed in an inlet zone directly adjacent the gas inlet member. The decomposition products of the starting materials are deposited on the substrates in a growing zone adjacent to the inlet zone, while the stream of gas is steadily depleted. The steps of introducing the starting materials are performed in order to reduce the horizontal extent of the inlet zone.

Claims 1 and 2 have been amended herein in the manner discussed during the personal interview which took place on 14 May 2009, and in a manner which the Examiner appeared to agree distinguished the cited prior art references. More specifically, Claims 1 and 2 have been amended to highlight the fact that the first

gaseous starting material (i.e., the hydride) is supplied from a single supply to both the bottom gas inlet zone and the top gas inlet zone, while the metalorganic compound enters through the middle gas inlet zone provided between the two hydride inlet zones. As was discussed during the personal interview, such a configuration allowed for the influencing of not only the position of the maximum of the growth rate, but also the shape of the depletion curve.

While Saito et al. does disclose three inlets (15, 16a, 16b) stacked vertically one on top of the other in Figure 9 thereof (as well as disclosing sets of inlets disposed 4 across horizontally and 2 vertically in Figures 5 and 6), Saito et al. does not disclose, teach or suggest in any way that the upper inlet (15) and the lower inlet (16a) are supplied with the same gaseous starting material (i.e., hydride) being supplied from a single supply, as is now clearly required by Claims 1 and 2 as amended. Thus, Applicant respectfully submits that there are clearly structural differences between Saito et al. and amended Claim 1, as well as operational differences between Saito et al. and amended Claim 2. As such, Applicant respectfully submits that neither Claim 1 nor Claim 2 is anticipated by Saito et al.

Additionally, Applicant respectfully submits that it would not have been obvious to one of ordinary skill in the art to have modified Saito et al. to have arrived at the invention recited in amended Claims 1 and 2. To the contrary, Applicant respectfully submits that Saito et al. would, in fact, no longer function as intended if it was modified to arrive at the claimed invention.

The main objective of Saito et al. is to provide an arrangement wherein a plurality of source gases having different formation energies can nevertheless be used to create a mixed compound semiconductor layer having uniform mixing

ratios. This is achieved by introducing the source gas having the smallest formation energy through the upper inlet (15) so that it enters the mixing area (17) closest to the substrate (6), while introducing the source gas having the largest formation energy through the lower inlet (16a) so that it enters the mixing area (17) farthest from the substrate (6). It would simply make no sense to introduce the same gaseous starting material (i.e., hydride) being supplied from a single supply through both the upper inlet (15) and the lower inlet (16a), as this would entirely defeat the purpose of Saito et al. and be directly contrary to the teachings thereof. As such, Applicant respectfully submits that amended Claims 1 and 2 are non-obvious in view of Saito et al., both when taken alone or when combined with Kaeppler or any other reference.

For the foregoing reasons, Applicant respectfully submits that all pending claims, namely Claims 1-20, are patentable over the references of record, and earnestly solicits allowance of the same.

Respectfully submitted,

May 27, 2009

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